



DEPARTMENT OF
ECOLOGY
State of Washington
IAA No. 1500077

INTERAGENCY AGREEMENT (IAA)

BETWEEN

THE STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY

AND

KING COUNTY

THIS INTERAGENCY AGREEMENT is made and entered into by and between the STATE OF WASHINGTON, DEPARTMENT OF ECOLOGY, hereinafter referred to as "ECOLOGY," and KING COUNTY pursuant to the authority granted by Chapter 39.34 RCW and King County Charter Section 120.

IT IS THE PURPOSE OF THIS AGREEMENT is to provide monitoring at Regional Stormwater Monitoring Program small streams sites from January 2015 to December of 2015 in King County and Snohomish County. Additionally, KING COUNTY analyze water quality and sediment quality samples collected in King and Snohomish County.

THEREFORE, IT IS MUTUALLY AGREED THAT:

1) STATEMENT OF WORK

KING COUNTY shall furnish the necessary personnel, equipment, material and/or service(s) and otherwise do all things necessary for or incidental to the performance of the work set forth in Appendices A and B, attached hereto and incorporated herein.

2) PERIOD OF PERFORMANCE

Subject to its other provisions, the period of performance of this IAA shall commence on **December 15, 2014**, or date of final signature, whichever comes later, and be completed by **April 15, 2016**, unless terminated sooner as provided herein. Amendments extending the period of performance, if any, shall be at the sole discretion of ECOLOGY.

3) COMPENSATION

Compensation for the work provided in accordance with this IAA has been established under the terms of state law, and in accordance with Governor's Executive Order 10-07 and RCW 39.26.180(3). This is a performance-based contract, in which payment is based on the successful completion of expected deliverables. The parties have determined that the cost of accomplishing the work herein will not exceed \$374,700. Payment for satisfactory performance of the work shall not exceed this amount unless the parties mutually agree to a higher amount. Compensation for services shall be based on the terms set forth in accordance with the tasks listed in Appendix A, Statement of Work and Budget, which is attached hereto and

incorporated herein. ECOLOGY will not make payment until it has reviewed and accepted the completed work.

4) BILLING PROCEDURE

KING COUNTY shall submit state form, Invoice Voucher A19-1A for payment requests. Payment will be made within thirty (30) days of a properly completed invoice, form A19-1A, with supportive documentation. Each invoice shall reference this Agreement (IAA) number and clearly identify the items related to performance under this Agreement. All expenses invoiced shall be supported with copies of invoices paid. Upon expiration of this Agreement, any claim for payment not already made shall be submitted within 30 days after the expiration date or the end of the fiscal year, whichever is earlier.

Invoices are to be sent to:

State of Washington Department of Ecology, Water Quality Program Attn: Brandi Lubliner P.O. Box 47600 Olympia, WA 98504-7600
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Invoices may be submitted on a quarterly basis or at the completion of the work.

Payment for approved and completed deliverables will be issued through Washington State's Department of Enterprise Services Statewide Payee Desk. To receive payment you must be registered as a state-wide vendor. To register submit a state-wide vendor registration form and an IRS W-9 form at website, <http://www.des.wa.gov/services/ContractingPurchasing/Business/VendorPay/Pages/default.aspx>. If you have questions about the vendor registration process you can contact DES at the Payee Help Desk at (360) 407-8180 or email payeehelpdesk@des.wa.gov.

5) ALTERATIONS AND AMENDMENTS

This Agreement may be amended by mutual agreement of the parties. Such amendments shall not be binding unless they are in writing and signed by personnel authorized to bind each of the parties.

6) SUBCONTRACTORS

KING COUNTY agrees to take complete responsibility for all actions of any Subcontractor used under this Agreement for the performance. When federal funding is involved there will be additional subcontractor requirements and reporting.

Prior to performance, KING COUNTY shall identify subcontractor(s) who will perform services in fulfillment of Agreement requirements, including their name, the nature of services to be performed, address, telephone, WA State Department of Revenue Registration Tax number (UBI), federal tax identification number (TIN), and anticipated dollar value of each subcontract.

7) ASSIGNMENT

The work to be provided under this Agreement, and any claim arising thereunder, is not assignable or delegable by either party in whole or in part, without the express prior written consent of the other party, which consent shall not be unreasonably withheld.

8) DISPUTES

In the event that a dispute arises under this Agreement, it shall be determined by a Dispute Board in the following manner. Each party to this Agreement shall appoint one member to the Dispute Board. The members so appointed shall jointly appoint an additional member to the Dispute Board. The Dispute Board shall review the facts, agreement terms, and applicable statutes and rules, and then make a determination of the dispute. The determination of the Dispute Board shall be final and binding on the parties hereto. The cost of resolution will be borne by each party paying its own cost. As an alternative to this process, either of the parties may request intervention by the Governor, as provided by RCW 43.17.330, in which event the Governor's process will control.

9) FUNDING AVAILABILITY

ECOLOGY's ability to make payments is contingent on availability of funding. In the event funding from state, federal, or other sources is withdrawn, reduced, or limited in any way after the effective date and prior to completion or expiration date of this Agreement, ECOLOGY, at its sole discretion, may elect to terminate the agreement, in whole or part, for convenience or to renegotiate the agreement subject to new funding limitations and conditions. ECOLOGY may also elect to suspend performance of the agreement until ECOLOGY determines the funding insufficiency is resolved. ECOLOGY may exercise any of these options with no notification restrictions.

KING COUNTY's obligation to provide services under this Agreement is contingent on appropriation of funding by KING COUNTY's legislative body. If no such appropriation is made for any future year, this Agreement will terminate at the close of the appropriation year for which the the last appropriation that funds these activities was made.

10) GOVERNING LAW AND VENUE

This Agreement is entered into pursuant to and under the authority granted by the laws of the state of Washington and any applicable federal laws. The provisions of this Agreement shall be construed to conform to those laws. This Agreement shall be construed and interpreted in accordance with the laws of the state of Washington, and the venue of any action brought hereunder shall be in the Superior Court for Thurston County.

11) INDEPENDENT CAPACITY

The employees or agents of each party who are engaged in the performance of this Agreement shall continue to be employees or agents of that party and shall not be considered for any purpose to be employees or agents of the other party.

12) ORDER OF PRECEDENCE

In the event of an inconsistency in the terms of this Agreement, or between its terms and any applicable statute or rule, the inconsistency shall be resolved by giving precedence in the following order:

- a. Applicable federal and state of Washington statutes, regulations, and rules.
- b. Mutually agreed written amendments to this Agreement.
- c. This Agreement.
- d. Statement of Work and Budget.
- e. Any other provisions of this Agreement, including materials incorporated by reference.

13) RECORDS MAINTENANCE

The parties to this Agreement shall each maintain books, records, documents and other evidence that sufficiently and properly reflect all direct and indirect costs expended by either party in the performance of the service(s) described herein. These records shall be subject to inspection, review or audit by personnel of both parties, other personnel duly authorized by either party, the Office of the State Auditor, and federal officials so authorized by law. All books, records, documents, and other material relevant to this Agreement will be retained for six years after expiration and the Office of the State Auditor, federal auditors, and any persons duly authorized by the parties shall have full access and the right to examine any of these materials during this period.

Records and other documents, in any medium, furnished by one party to this Agreement to the other party, will remain the property of the furnishing party, unless otherwise agreed. The receiving party will not disclose or make available this material to any third parties without first giving notice to the furnishing party and giving it a reasonable opportunity to respond. Each party will utilize reasonable security procedures and protections to assure that records and documents provided by the other party are not erroneously disclosed to third parties.

14) RIGHTS IN DATA

Unless otherwise provided, data which originates from this Agreement shall be "works for hire" as defined by the U.S. Copyright Act of 1976 and shall be owned by the state of Washington. Data shall include, but not be limited to, reports, documents, pamphlets, advertisements, books magazines, surveys, studies, computer programs, films, tapes, and/or sound reproductions. Ownership includes the right to copyright, patent, register, and the ability to transfer these rights.

15) SEVERABILITY

If any provision of this Agreement or any provision of any document incorporated by reference shall be held invalid, such invalidity shall not affect the other provisions of this Agreement which can be given effect without the invalid provision, if such remainder conforms to the requirements of applicable law and the fundamental purpose of this agreement, and to this end the provisions of this Agreement are declared to be severable.

16) TERMINATION FOR CAUSE

If for any cause, either party does not fulfill in a timely and proper manner its obligations under this Agreement, or if either party violates any of these terms and conditions, the aggrieved party will give the other party written notice of such failure or violation. The responsible party will be given the opportunity to correct the violation or failure within 15 working days. If failure or violation is not corrected, this Agreement may be terminated immediately by written notice of the aggrieved party to the other.

17) TERMINATION FOR CONVENIENCE

Either party may terminate this Agreement upon thirty (30) days' prior written notification to the other party. If this Agreement is so terminated, the parties shall be liable only for performance rendered or costs incurred in accordance with the terms of this Agreement prior to the effective date of termination.

18) WAIVER

A failure by either party to exercise its rights under this Agreement shall not preclude that party from subsequent exercise of such rights and shall not constitute a waiver of any other rights under this Agreement unless stated to be such in a writing signed by an authorized representative of the party and attached to the original Agreement.

19) AGREEMENT MANAGEMENT

The representative for each of the parties shall be responsible for and shall be the contact person for all communications and billings regarding the performance of this Agreement.

The ECOLOGY Representative is:	The KING COUNTY Representative is:
Name: Ms. Brandi Lubliner Address: 300 Desmond Dr. SE (USPS) P.O.Box 47600 (FedEx) Olympia, WA 98504-7600 Phone: 360-407-7140 Email: brwa461@ecy.wa.gov	Name: Colin Elliot Address: King County Environmental Laboratory 322 West Ewing St Seattle, WA 98119 Phone: 206-477-7113 Email: Colin.Elliot@kingcounty.gov

20) ALL WRITINGS CONTAINED HEREIN

This Agreement contains all the terms and conditions agreed upon by the parties. No other understandings, oral or otherwise, regarding the subject matter of this Agreement shall be deemed to exist or to bind any of the parties hereto.

The signatories to this Agreement represent that they have the authority to bind their respective organizations to this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement.

State of Washington
Department of Ecology

King County

Signature Date

Signature Date

Polly Zehm

Print Name:

Deputy Director

Title:

Approved as to form:
Attorney General's Office

Appendix A

King County -Detailed Scope of Work

Project Summary: Puget Lowland Small Streams Monitoring for the RSMP

The Stormwater Work Group (SWG) members recommended a specific NPDES municipal permittee-funded plan for monitoring the effects of stormwater under the permits in the Puget Sound region. The resulting program, a subset of the overall strategy, is called the Regional Stormwater Monitoring Program (RSMP). The RSMP has three main components; one of which is a status and trends monitoring in Puget ecoregion lowland streams and Puget Sound marine nearshore. For the Puget lowland streams the focus for monitoring is water quality and "watershed health" (physical habitat, sediment chemistry, and biological communities) of wadeable streams.

The RSMP Coordinator at Ecology formed a small streams monitoring team made up of federal, state, and local government entities to conduct the small streams monitoring. These team members include; King County, Skagit County, San Juan Conservation District, and the United State Geological Survey (USGS) who will conduct the RSMP streams sampling. KING COUNTY is one of these entities will conduct monitoring at RSMP small streams sites from January to December of 2015 in King County and Snohomish County.

Project Activities, Tasks, and Deliverables

Task A1: Planning: Confirm suitability, secure permission if necessary, and develop stage height/flow measurement plan for each site

Deliverable A1.1: Summary of site visit for suitability, permissions and stage measurement approach. (Target Date January 31, 2015)

Task A2: Project Management and Quarterly Reporting

Deliverable A2.1: Prepare and send via email, project management status updates (quarterly) and attend coordination meetings (typically by phone monthly). (Target Dates: March 31, 2015; June 30, 2015; September 30, 2015; and January 29, 2016).

Task A3: Conduct monthly water quality monitoring from January – December 2015

Deliverable A3.1: Monthly field measured data will be submitted quarterly with copies of field data sheets. (Target Dates: March 31, 2015; June 30, 2015; September 30, 2015; and January 29, 2016).

Deliverable A3.2: Final water quality field and laboratory data deliverable sent to RSMP Coordinator (Brandi Lubliner). (Target Date: February 29, 2016).

Task A4: Conduct Watershed Health Monitoring during the index period from July – September 2015.

Deliverable A4.1: Field data will be submitted using electronic field forms and field data sheets quarterly. Grab samples will be sent to designate laboratories. (Target Dates: September and December 2015).

Task B1: King County Environmental Laboratory will analyze water quality samples and sediment quality samples collected by USGS and KING COUNTY staff in King and Snohomish County.

Deliverable B.1: Lab result narratives with quality assurance and finalized data for water and sediment samples analyzed by King County Environmental Laboratory (KCEL), sent quarterly for results that are available.

Deliverable B.2: Final laboratory data in an Environmental Information Management (EIM) compatible spreadsheets, sent to the RSMP Coordinator. Target Date: February 29, 2016.

Project Schedule

Calendar Year	2014	2015				2016
Task	4	1	2	3	4	1
1. Site Summary						
2. Project Management & Quarterly reports						
3. Water Quality monthly monitoring						
4. Laboratory Analysis						

Detailed Descriptions of Tasks and Deliverables

KING COUNTY staff will monitor suitable RSMP small stream sites located in King and Snohomish County.

Task A1: Visit sites, secure permissions and develop winter flow monitoring plan for each site.

Total Cost: \$6,300

Most streams are expected to still be wadeable and sample timing can be planned to accommodate better sampling conditions within that month timeframe. However, some creeks may have unsafe high flow conditions for wading or such low flows measurement using meters is impossible. The RSMP Coordinator needs to understand the extent of streams that may exhibit these conditions during 2015. Using best professional judgment, KING COUNTY shall conduct a site visit to visualize low flow conditions and estimate tenable high flow conditions.

Deliverable A1.1: Summary of site visit for suitability, permissions and stage measurement approach.

Due Date: January 31, 2015

KING COUNTY will email a letter to the RSMP Coordinator providing a summary of site conditions: 1) dry in late summer, 2) anticipated to be hazardous for wading in winter months, and 3) how stage and discharge is planned to be monitored near the site. This letter will also discuss any pertinent local knowledge about the sites and/ or any outstanding permission necessary for monitoring.

Task A2: Project Management and Quarterly Reporting

Total Cost: \$3,400

Colin Elliot will be the point of contact at KING COUNTY. KING COUNTY will provide oversight of the field team monitoring in King County, lab analysis of water and sediment quality samples, and interface with the RSMP Coordinator (Brandi Lubliner) to ensure the goals and reporting requirements are met. Project management by KING COUNTY will include attending the coordination calls hosted by the RSMP Coordinator, managing the field team, resolving any monitoring issues, and preparation of deliverables. Project management time and expenses will be tracked and an invoice for time should be sent with a general status report accompanying the quarterly data reports. The status summary of the project during the course of monitoring will be the billable item for project management. If the expenses associated with project management exceed the quarterly estimate (1/4 of the total deliverable), then timesheets and an expense report may be submitted as justification.

After the last monitoring event of the year, KING COUNTY will send the RSMP Coordinator the final EIM data spreadsheet and a completeness report on samples taken for each parameter at each site.

Deliverable A2.1: Send (email) quarterly project management status updates. Participate in coordination meetings (monthly calls) for sampling alignment and management.

**Due Date: March 31, 2015; June 30, 2015; September 30, 2015, and January 29, 2016.
(Approximately \$850 per quarter)**

KING COUNTY will prepare and send a project management status update in the form of an emailed letter to the RSMP Coordinator. KING COUNTY will participate on the RSMP Coordination conference calls. These emails are encouraged to accompany the data deliverables, however if communication about monitoring or site conditions is important, then the county is expected to send independent correspondence. This status update will be comprehensive but concise. The use of tables is encouraged. Project management for which attending the coordination meetings, and preparing quarterly reports throughout the project is the deliverable.

The status report will contain a summary of the status of monitoring efforts to date, any QA/QC concerns and resolutions. Project management status updates will include an invoice for the costs associated with project management and preparation of deliverables. The final deliverable in February 2016 will briefly summarize performance and completeness of sampling. This will include the number of monitoring events, including attempted monitoring trips where monitoring was not successful. The final report deliverable will also include the finalized data for the field gathered parameters, stage height, and flow measurements in the provided EIM spreadsheet.

Task A3: Conduct monthly water quality monitoring from January – December 2015

Monitoring will consist of both field measured parameters using a multi-meter and grab samples for laboratory measured parameters, listed in the table below and discussed in detail in the QAPP. Ecology's EIM data spreadsheet template will be provided by the RSMP Coordinator and populated with the field-measured data. This EIM spreadsheet and copies of the field data sheets will be sent to the RSMP Coordinator, who will verify and enter the data into EIM.

Water quality and field parameters to be monitored.

Parameter	Where measured
Ammonia	KCEL
Chloride	KCEL
Dissolved organic carbon	KCEL
Dissolved oxygen	Field Meter
Hardness	KCEL
Fecal coliform	KCEL
Metals (total and dissolved): arsenic, cadmium, chromium, copper, lead, silver, and zinc	KCEL
Nitrate-Nitrite-N	KCEL
Polycyclic aromatic hydrocarbons	KCEL
pH	Field Meter
Orthophosphate	KCEL
Specific Conductance	Field Meter
Temperature	Field Meter
Total nitrogen	KCEL
Total phosphorus	KCEL
Total suspended solids	KCEL
Turbidity	KCEL
Stream Flow	Field Meter
Staff Height	Field Observation

Sub-task A3(a): Monthly Water Quality Monitoring

Total Cost = \$66,000 for up to 19 RSMP small stream sites in King and Snohomish County. (Costs include monitoring labor, site repeat visits, equipment, and supplies)

Beginning January 2015, KING COUNTY will conduct monthly water quality monitoring at **19** RSMP sites within King County and Snohomish County, unless any of these sites is deemed unsuitable according to the criteria in the monitoring plan for this study *Quality Assurance Project Plan for Status and Trends Monitoring of Small Streams in the Puget Lowlands Ecoregion for Monitoring Conducted using Pooled RSMP Funds contributed by Municipal Stormwater Permittees (QAPP)*. These **19** sites are further described:

12 RSMP stream sites in King County

Outside UGA Site Order #: (8, 24, 38, 45, and 47)

Within UGA Site Order #: (1, 2, 34, 36, 40, 42, and 55)

7 RSMP sites in Snohomish County

Outside UGA Site Order #: (11 and 39)

Within UGA Site Order #: (3, 9, 18, 48, and 50)

RSMP Coordinator will notify the county in writing if a site becomes disqualified for sampling.

If site(s) identified in sub-task A3(a) fail suitability criteria at some point during the course of monitoring then, KING COUNTY will notify the RSMP Coordinator immediately. A re-sample in the same month will be attempted and if the site still fails suitability, then that site will not be sampled that month. KING COUNTY should resume monitoring the following month if conditions improve, or discuss with the RSMP Coordinator for a full cessation of monitoring at that site.

Six sites will be sampled in duplicate twice (once each in a winter month and a summer month) for an inter-laboratory comparison study. One duplicate set will be sent to Manchester Environmental Laboratory (MEL) and the other set analyzed by King County Environmental Laboratory (KCEL), discussed more in Appendix B.

Optional Sub-task A3(b): Addition of Water Quality Sites

(\$3,512 per site in King County and \$3,010 in Snohomish County)

Site suitability conditions may change at any point in the sampling program across all of the RSMP sites. These changes may be accommodated by this agreement by increasing (or decreasing) the number of sites monitored by KING COUNTY staff. The costs for these changes per site are location dependent (King or Snohomish County). The anticipated change in the final number of sites is expected to be low and will be capped at 5 sites. These include sites that are currently considered “maybe” sites. All replacement sites will come in order on the master list and must meet suitability criteria.

The RSMP coordinator will be notified by the other RSMP contractors about sites suitability and disqualifications in other counties. The RSMP Coordinator will notify KING COUNTY in writing to begin sampling the additional site(s). The timeline that replacement sites would begin monitoring is from January – July, otherwise a replacement site will not be sought after the summer watershed health monitoring.

Deliverables A3.1 Quarterly field measured data and copies of field data sheets.

Due Dates: March 31, 2015; June 30, 2015; September 30, 2015, and January, 29, 2016.

Costs for quarterly data reporting are included in Task A2.

KING COUNTY will send field measured data in the EIM spreadsheet format to the RSMP Coordinator for sampling conducted at each RSMP monitoring site with each quarterly report. This will also include photocopies of field data sheets and notes taken in the field. This data package will be attached to an email to the RSMP Coordinator. The email will also provide a brief status update on the completeness of the grab samples for the laboratory parameters for

each site. This deliverable will invoice the costs associated with monthly monitoring including labor, travel, equipment, and monitoring supplies.

Task A4: Conduct watershed health monitoring during July – September 2015

**Total Cost: \$71,050 for up to 38 RSMP small stream sites in King and Snohomish County.
(Costs include all labor, travel, training, equipment and supplies)**

Watershed Health monitoring consists of benthic macroinvertebrate, periphyton, stream bed sediment and habitat monitoring, which are discussed in detail in the monitoring plan for this study entitled: *Quality Assurance Project Plan for Status and Trends Monitoring of Small Streams in the Puget Lowlands Ecoregion for Monitoring Conducted using Pooled RSMP Funds contributed by Municipal Stormwater Permittees*. KING COUNTY will conduct Watershed health monitoring (WHM) at all retained WQ sites from Task A3 plus additional sites as listed below. Much of the data collected for habitat variables will be recorded in the field. KING COUNTY will seek permit coverage from Washington Department of Fish and Wildlife for a scientific collection permit to collect macroinvertebrates at the sites monitored by KING COUNTY staff. Benthic macroinvertebrates and periphyton samples will be stored by KING COUNTY for delivery to the qualified laboratory. Sediment samples will be analyzed at the King County Environmental Laboratory (KCEL) or sent to Manchester Environmental Laboratory (MEL) as shown in the table below. Chlorophyll a from the periphyton sample and sediment samples for pesticides, and PCB congener analysis will be sent to MEL for analysis at a qualified contracted laboratory. KING COUNTY will follow notification guidelines and chain-of-custody procedures discussed in their own lab manual and for correspondence with MEL the MEL Manual <http://aww.ecology/programs/eap/forms/labmanual.pdf>. Samples will be shipped via Fed Ex to MEL.

MEL = Manchester Environmental Laboratory
WA State Department of Ecology
Attn: Sample Receiving
7411 Beach Dr E
Port Orchard, WA 98366-8204
Phone: 360-871-8800
Fax: 360-871-8850.

Ten WHM sites will be sampled in duplicate for an inter-laboratory comparison study. One duplicate set will be sent to Manchester Environmental Laboratory (MEL) and the other set analyzed by King County Environmental Laboratory (KCEL), discussed more in Appendix B.

Sub-task A4.1: Watershed Health Monitoring

Total Cost = \$71,050 to monitor 38 RSMP small stream sites in King and Snohomish County following WHM protocols.

Once during the index period (July 1 – October 15th, 2015) KING COUNTY will conduct watershed health monitoring at the following RSMP sites in King and Snohomish County.

25 RSMP stream sites in King County

Outside UGA Site Order #: (8, 24, 38, 45, 47, 69, 72, 74, 86, 94, and 98)

Within UGA Site Order #: (1, 2, 34, 36, 40, 42, 55, 61, 67, 70, 74, 80, 82, and 84)

13 RSMP sites in Snohomish County

Outside UGA Site Order #: (11, 39, and 79)

Within UGA Site Order #: (3, 9, 18, 48, 50, 65, 68, 77, 79, and 85)

If site(s) identified in Task A4 fail suitability criteria for watershed health monitoring, KING COUNTY will notify the RSMP coordinator immediately. A re-sample will be attempted and if the site still fails suitability, then that site will not be further sampled. KING COUNTY will notify the RSMP coordinator, who will notify the RSMP Pooled Resources Oversight Committee that the site is disqualified for sampling.

Optional Sub-task A4.2: Addition or Deletion of Watershed Health Sites

\$1,756 per site (King or Snohomish County) as needed from January to August 2015.

Site suitability conditions may change at any point in the sampling program across all of the RSMP sites. These changes may be accommodated by this agreement by increasing or decreasing the number of sites monitored by KING COUNTY staff. The anticipated change in the final number of sites is expected to be low and is capped to 5 sites. All replacement sites will come in order on the master list and must meet suitability criteria.

The RSMP coordinator will be notified by the other RSMP contractors about sites suitability and disqualifications in other counties. The RSMP Coordinator will notify KING COUNTY in writing to begin sampling the additional site(s). The timeline that replacement sites would begin monitoring is from January – August, otherwise a replacement site will not be sought after the summer watershed health monitoring.

Deliverables A4.1 Quarterly field measured data and copies of field data sheets.

Due Dates: September 30, 2015 and December 30, 2015. (Quarterly report costs are included in task A2).

KING COUNTY will send field measured data in the provided electronic field forms and spreadsheets to the RSMP Coordinator for sampling conducted at each RSMP monitoring site. This will include sending photocopies of field data sheets and notes taken in the field. This data package will be attached to an email to the RSMP Coordinator. The email will also provide a brief status update on the completeness of the grab samples for the laboratory parameters for each site. This deliverable will invoice the costs associated with the summer monitoring including labor, travel, training, equipment, and monitoring supplies.

For habitat variables collected under WHM, the RSMP Coordinator will supply Ecology's watershed health electronic software and specialized field data spreadsheets for use by KING COUNTY. This software will be used to populated habitat data into a format suitable for EIM, and those forms sent to the RSMP Coordinator along with copies of any other field notes. Ecology will review and upload the habitat data into EIM.

King County - Budget Detail by Task

	Task 1. Planning	Task 2. Project Management	Task 3. WQ Monthly for 19 routine site visits	Task 4. WHM for 38 sites	Total by Object
King County Salaries and Benefits	\$4,095	\$2,210	\$41,730	\$45,630	\$93,665
Supplies	0	0		\$850	\$850
Equipment	0	0	\$1,800		\$1800
Overhead for Project (Estimated at 35%)	\$2,205	\$1,190	\$22,470	\$24,570	\$50,435
King County Lab Analyses	0	0	\$196,150 (23 samples/mo)	\$31,800	\$227,950
Total Task	\$6,300	\$3,400	\$262,150	\$102,850	\$374,700

Appendix B

King County Environmental Laboratory Analysis of RSMP Samples

Detailed Scope of Work

Project Summary: King County Environmental Laboratory analysis of samples collected for RSMP Lowland Small Streams

The Regional Stormwater Monitoring Program (RSMP) small streams component will use multiple laboratories to accomplish sample analysis throughout the Puget Sound ecoregion. The small streams focus for monitoring is water quality and "watershed health" (physical habitat, sediment chemistry, and biological communities) of wadeable streams. King County is one of these entities who will conduct monitoring at RSMP small streams sites from January 2015 to December of 2015 in King County and Snohomish County. King County Environmental Laboratory (KCEL) will analyze water quality and sediment quality samples collected in King and Snohomish County, primarily by KING COUNTY staff. Samples collected by the United States Geological Survey (USGS) staff will also be analyzed by KCEL when sampling prearranged by USGS.

Project Activities, Tasks, and Deliverables

Task B1: King County Environmental Laboratory will analyze water quality samples and sediment quality samples collected in King and Snohomish County.

Deliverable B.1: A summary of water and sediment samples analyzed, laboratory data, quality assurance results and finalized data sent to the RSMP Coordinator quarterly. (Target 2015 Dates: March 31, June 30, September 30, January 29, 2016).

Deliverable B.2: A final populated EIM spreadsheet of data results from the water and sediment samples analyzed at KCEL. (Target Date: February 28, 2016).

Project Schedule

Calendar Year	2015				2016
	1	2	3	4	1
Task					
B1. Water Quality					
B2. Sediment Quality					Optional extension
B3. EIM submittal					

Detailed Descriptions of Tasks and Deliverables

Task B1: Laboratory analysis of monthly water quality samples and annual sediment samples

Total Cost: \$227,950

King County Environmental Laboratory (KCEL) will analyze water and sediment samples for RSMP samples collected by within King and Snohomish County. KCEL will maintain its accreditation with Ecology, follow standard laboratory quality control practices, and meet the measurement quality objectives stated in the study plan: *Quality Assurance Project Plan for Status and Trends Monitoring of Small Streams in the Puget Lowlands Ecoregion for Monitoring Conducted using Pooled RSMP Funds contributed by Municipal Stormwater Permittees*.

Deliverable B.1: Quarterly laboratory analysis status and data results package.

Due Dates: March 31, 2015; June 30, 2015; September 30, 2015, and January 29, 2016.
(Quarterly reporting costs are included in Task A2).

KING COUNTY will send final data analytical results and laboratory QC results to the RSMP Coordinator. These result narratives are in addition to the quarterly report deliverables. Laboratory results will also be entered into the EIM data spreadsheet template by KING COUNTY. This EIM spreadsheet and copies of the field data sheets will be sent to the RSMP Coordinator, who will provide a quality review and enter the data into EIM.

Deliverable B.2: Final laboratory data results formatted for EIM.

Due Dates: March 31, 2016 (Report costs are included in Task A2).

Table B1 list the parameters to be analyzed from the monthly water quality samples. KCEL is anticipated to receive **19** routine water quality samples monthly from KING COUNTY monitoring staff. On occasion, additional samples will be analyzed by KCEL. These will include samples for field replicates (~24 samples per year), field filtration blanks (2 per year for Orthophosphate, dissolved organic carbon and dissolved metals) and inter-laboratory comparison samples (~ 6 samples for 2 events per year). Depending upon future coordination with USGS field crews a maximum of 60 water quality samples per year (4 per month) may also be analyzed by KCEL monthly. In total the number of samples analyzed by KCEL will range from 23 most months up to a possible 35 samples on a given month. KCEL will be given ample notice by the RSMP coordinator, USGS or KING COUNTY staff on the number of samples each month.

Table B2 lists the parameters to be analyzed for in the sediment samples collected in the summer of 2015. KING COUNTY staff will coordinate with KCEL for sample deliver for the 38 + QC samples over the 3 month summer index period. KCEL will send jars of remaining sediment sample to MEL in appropriate jars following QC protocols established in the QAPP for this study.

King County Environmental Laboratory - Budget Detail per Unit

Table B1

RSMP Small Streams water quality samples			KCEL Analytical Costs for samples from Pooled RMSRP sites				
	Cost by Analytical Method		23			Inter-lab comparison (6 samples each lab)	
Parameter	Method	Cost for KC Analysis	# Samples (monthly)	# QC Samples (10% of total)	KCEL Costs		
Chloride	EPA 300.0 or SM4110B	15	276	28	\$ 4,560		
Hardness	SM 2430B or EPA 200.8	-	276	28	\$ -		
Fecal coliform	SM 9222D	50	276	28	\$ 15,200		
Dissolved Organic Carbon	SM 5310	40	276	30	\$ 12,240		
Total suspended solids	SM 2540D	15	276	28	\$ 4,560		
Turbidity	SM 2130 or EPA 180.1	15	276	28	\$ 4,560	\$ 180	six sites * 2 months
Ammonia	SM 4500-NH3H or G	20	276	28	\$ 6,080	\$ 240	six sites * 2 months
Nitrate-Nitrite-N	SM 4500-NO3-I or F	20	276	28	\$ 6,080	\$ 240	six sites * 2 months
Orthophosphate	SM 4500 PG or PF	20	276	30	\$ 6,120		
Total nitrogen	SM 4500-N-B or N-C	35	276	28	\$ 10,640		
Total phosphorus	SM 4500-P H or PF	25	276	28	\$ 7,600		
Total Metals (Ag, As, Cu, Cd, Cr, Pb, Zn)	EPA 200.8	75	276	28	\$ 22,800		
Dissolved Metals (Ag, As, Cu, Cd, Cr, Pb, Zn)	EPA 200.8	125	276	30	\$ 38,250	\$ 1,500	six sites * 2 months
PAHs	8270D SIM std list	175	276	28	\$ 53,200	\$ 2,100	4 sites * 2 months
		subtotal		304	\$ 191,890	\$ 4,260	

Table B2

RSMP Small Streams Sediment quality samples			KCEL Analytical Costs for samples from Pooled RMSP sites				
	Cost by Analytical Method		38			Inter-lab comparison (10 samples each lab)	
Parameter	Method	Cost for KC Analysis	# samples summer 2015	# QC Samples (10% of total)	Cost		
Grain size**	PSEP 1986, seive and pipette	\$ 100	38	4	\$ 4,200		
Total organic carbon (TOC)	PSEP (1986, with 1997a,b updates), combustion/CO2	\$ 100	38	4	\$ 4,200		
Percent Solids x2	SM 2540 G	\$ 15	76	8	\$ 1,260	\$ 150	ten sites * once
Metals (arsenic, cadmium, chromium, copper, lead, silver, and zinc)	EPA 200.8 (ICP/MS)	\$ 120	38	4	\$ 5,040	\$ 1,200	ten sites * once
PAHs - standard list	8270D (GCMS)	\$ 175	38	4	\$ 7,350	\$ 1,050	six sites * once
Phthalates	8270D (GCMS)	\$ 175	38	4	\$ 7,350		
				42	\$ 29,400	\$ 2,400	